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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,555	03/10/2004	Eun-Tae Won	678-1216	4407

66547   7590   11/20/2007
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EXAMINER
BEHNCKE, CHRISTINE M

ART UNIT	PAPER NUMBER
3661	

MAIL DATE	DELIVERY MODE
11/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/797,555	WON ET AL.
	Examiner	Art Unit	
	Christine M. Behncke	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 August 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-32 and 34-47* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-32 and 34-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This office action is in response to the Amendment and Remarks filed 24 August

2007, in which claims 1-16, 18-32, and 34-47 were presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 116, 18-29, 46 and 47 are rejected under 35 U.S.C. 112, first paragraph,

as failing to comply with the written description requirement. The claims contains

subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention. The independent claims

were amended to include the limitation: "determining whether the nearby vehicles store

the vehicle driving information after detecting vehicle driving information included in the

vehicle management information message when the vehicle driving information satisfies

the routing condition". This limitation is not disclosed, described or even suggested in

the original disclosure. The drawings of the system do not even include a storage

memory to store the vehicle driving information. Applicant's submitted Remarks filed

8/24/07 do not address where in the disclosure this limitation has any support. Further it

is not clear in the claim language which vehicle is doing the determining whether to

store the information or not (nearby vehicles or the source vehicles).

Response to Arguments

Applicant's arguments filed 8/24/07 have been fully considered but they are not persuasive. Regarding the reference Gorday, Applicant contends that the reference does not create vehicle management information based on vehicle driving information, but instead relative locations and directions. The Examiner disagrees. Gorday describes the claim language in paragraph [0015]. Applicant's arguments that Gorday does not teach the location and direction of the only the source vehicle, is not persuasive. The independent claims do not claim this feature and the dependent claims that are similar are not as specific/limiting as argued. The claim language only says creating with the source vehicle and the vehicle safety information based on its own vehicle driving information... including at least one of position and direction of the source vehicle. This information does not exclude relative position or direction. Regarding Applicant's contention the applied reference does not teach a message reception condition, the Examiner disagrees. The Examiner refers to Gorday paragraphs [0015]-[0016].

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 9, 12, 14, 16-19, 25, 28, 30, 32, 35, 41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorday et al., US 2004/0192331, in view of Lutter, US 2002/0198653.

(**Claim 1**) Gorday et al. discloses a method for forming an ad-hoc network between vehicles to communicate vehicle management information between them ([0014]), comprising the steps of: collecting, by a source vehicle, its own vehicle driving

information, and creating vehicle management information of the source vehicle based on the vehicle driving information ([0015]); setting up, by the source vehicle, a routing condition and a message reception condition composed of predetermined vehicle traveling requirements based on the vehicle management information ([0015]-[0016]), and transmitting a vehicle management information message having the routing condition, the message reception condition and the vehicle management information to nearby vehicles ([0015]-[0016]); searching, by the nearby vehicles, for the routing condition and the message reception condition upon receiving the vehicle management information message ([0016]); determining whether the nearby vehicles route the vehicle management information message to another vehicle when the vehicle driving information of the nearby vehicles satisfies the routing condition ([0015]-[0016]). Gorday does not describe determining whether the nearby vehicles should store the driving information after receiving the information message after the driving information satisfies the routing condition. However, Lutter teaches a message relay system wherein the receiving vehicle after satisfying the conditions to receive the message, determined whether to store the vehicle driving information after detecting the information (figure 2, [0029]). It would have been obvious to one of ordinary skill in the communications art to combine the invention of Gorday with the teachings of Lutter because as Lutter suggests, The deletion of old received messages cleans the memory and alls the vehicle to particularly transmit the information to particular others ([0040]) and if the conditions are satisfied the vehicle can used the stored information to determine conditions around it ([0033]).

(**Claim 14**) Gorday et al. discloses an apparatus for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them, the apparatus comprising: a sensor for collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle ([0015]); a communicator for receiving a vehicle management information message having vehicle management information, a routing condition and a message reception condition of nearby vehicles from the nearby vehicles (wireless communication modules, [0015]-[0016]), for inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition ([0017]), for comparing the vehicle traveling requirement with the collected vehicle driving information ([0016]-[0017]), and for determining whether the vehicle management information message is routed to another vehicle when the vehicle driving information of the nearby vehicles satisfies the routing condition ([0016]); and a display for informing a driver of the collected vehicle driving information ([0013]). Gorday does not describe a controller determining whether the nearby vehicles should store the driving information after receiving the information message after the driving information satisfies the routing condition. However, Lutter teaches a message relay system wherein the receiving vehicle after satisfying the conditions to receive the message, determined whether to store the vehicle driving information after detecting the information (figure 2, [0029]). It would have been obvious to one of ordinary skill in the communications art to combine the invention of Gorday with the teachings of Lutter because as Lutter suggests, The deletion of old received messages cleans the memory

and alls the vehicle to particularly transmit the information to particular others ([0040])

and if the conditions are satisfied the vehicle can used the stored information to

determine conditions around it ([0033]).

(Claim 19) Gorday et al. discloses an apparatus for forming an ad-hoc network

between a source vehicle and nearby vehicles to communicate vehicle management

information between them, the apparatus comprising: a sensor for collecting vehicle

driving information including at least one of vehicle position, direction, and speed

information of the source vehicle ([0015]); a communicator for receiving vehicle driving

information of nearby vehicles (wireless communication modules [0015]); a controller for

creating vehicle management information based on individual vehicle driving information

of the source vehicle and the nearby vehicles ([0015]-[0016]), for setting up a

predetermined routing condition and a message reception condition for routing the

vehicle management information ([0015]-[0017]), for inserting a predetermined vehicle

traveling requirement into the routing condition and the message reception condition

([0017]), and for creating a vehicle management information message having the

routing condition, the message reception condition and the vehicle management

information (figure 5); and a display for informing a driver of the vehicle driving

information of the source vehicle and the vehicle management information ([0013]).

Gorday does not describe determining whether the nearby vehicles should store the

driving information after receiving the information message after the driving information

satisfies the routing condition. However, Lutter teaches a message relay system

wherein the receiving vehicle after satisfying the conditions to receive the message,

determined whether to store the vehicle driving information after detecting the information (figure 2, [0029]). It would have been obvious to one of ordinary skill in the communications art to combine the invention of Gorday with the teachings of Lutter because as Lutter suggests, The deletion of old received messages cleans the memory and alls the vehicle to particularly transmit the information to particular others ([0040]) and if the conditions are satisfied the vehicle can used the stored information to determine conditions around it ([0033]).

(Claim 30) Gorday et al. discloses a method for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them comprising the steps of: collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle ([0015]); receiving vehicle management information message having vehicle management information, a message reception condition and a routing condition of nearby vehicles from the nearby vehicles (figure 4, [0015]-[0016]), inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition ([0015]-[0017]), comparing the vehicle traveling requirement with the collected vehicle driving information, and determining whether the vehicle management information message is routed to another vehicle when the vehicle driving information of the nearby vehicles satisfies the routing condition ([0015]-[0017]); and informing a driver of the vehicle driving information of the source vehicle ([0013]).

(Claim 35) Gorday et al. discloses a method for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management

information between them comprising the steps of: collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle ([0015]); receiving vehicle driving information of nearby vehicles from the nearby vehicles ([0016]); creating vehicle management information based on the vehicle driving information of the source vehicle and the nearby vehicles, setting up a routing condition and a message reception condition for routing the vehicle management information ([0015]-[0016]), inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition ([0015]-[0017]), and creating a vehicle management information message having the routing condition, the message reception condition and the vehicle management information ([0016]-[0017]); and informing a driver of the vehicle driving information and the vehicle management information of the source vehicle ([0013]).

(**Claims 9, 25 and 41**) Gorday et al. further discloses wherein the rerouting condition further includes ID and routing area information of a routing vehicle and the message reception condition further includes ID information of a destination vehicle ([0016]-[0017]).

(**Claims 12, 28 and 44**) Gorday et al further discloses wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets the routing vehicle ID to an ID of the specified vehicle based on the vehicle driving information of the specified vehicle, and transmits the vehicle management information message to the specified vehicle (figures 2 and 3, [0016]).

(**Claims 16 and 32**) Gorday et al. further discloses wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information ([0015]).

(**Claim 18**) Gorday et al. further discloses the controller receives the vehicle management information message from the communicator if the communicator determines that the vehicle driving information is compatible with the vehicle traveling requirements defined in the message reception condition ([0014]).

Claim Rejections - 35 USC § 103

Claims 2, 3, 6-8, 15, 20, 23, 24, 31, 33, 34, 36, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorday et al. in view of Impson et al., US 6,708,107.

(**Claims 2, 15, 20, 31 and 36**) Gorday et al. discloses the method and apparatus as previously described, but does not detail the form of the message transferred between vehicles. Impson et al. teaches an ad-hoc communication network between vehicles, wherein the message transmitted contains in a header a routing condition (figure 5, column 5, lines 30-61), and in the main body of the message vehicle management information of the source vehicle (column 5, lines 5-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method and apparatus of Gorday et al. with the teachings of Impson et al. because as Impson suggests using a message format standard among vehicles enables efficient cooperative participation between vehicle systems, allowing the system to target the system needs and quickly discard non-relevant information (column 2, lines 14-43).

(**Claims 3**) Gorday et al. teaches wherein the step for searching the routing

condition includes the step of: searching, by the nearby vehicles, for the routing

condition upon receiving header information of the vehicle management information

message ([0014]); and comparing, with the nearby vehicles, their vehicle driving

information with the vehicle traveling requirements contained in the routing condition

([0014]-[0015]).

(**Claims 6, 23, and 39**) Gorday et al. describes wherein the source vehicle sets

up a message reception condition to allow only vehicles satisfying a prescribed vehicle

traveling requirements to receive the vehicle management information message

([0016]), includes the message reception condition in the routing condition, and then

transmits the message ([0016]).

(**Claims 7, 24 and 40**) Gorday et al. further describes wherein the vehicle

traveling requirement includes at least one of vehicle position, speed, and direction

information ([0015]).

(**Claims 8 and 34**) Gorday et al. further describes wherein the vehicle

management information message is transmitted to a driver if the nearby vehicles are

compatible with the message reception condition ([0014]).

Claim Rejections - 35 USC § 103

Claims 4, 5, 10, 11, 13, 21, 22, 26, 27, 29, 37, 38, 42, 43, and 45-47 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Gorday et al. in view of Impson et

al., and in further view of Kiendl et al., US 6,654,681.

Gorday et al. and Impson et al. describe methods and apparatus for forming an ad hoc network between vehicles to communicate vehicle management information and generally vehicle status information that may affect other vehicles, including speed, position, braking, turning, and possible traffic congestion, further creating a vehicle management information using at least one of the vehicle driving information and the vehicle safety information based on the source vehicle ([0015]). Neither reference specifically describes vehicle safety information based on the own vehicle and nearby vehicles. However, Kiendl et al. teaches a vehicle ad hoc network that teaches vehicles transmitting messages containing vehicle safety information based on the vehicle's own driving information and the vehicle driving information of the nearby vehicles (column 2, lines 15-30), and including at least one of position and direction of the source vehicle in the vehicle driving information (column 6, lines 45-63); and creating a vehicle management information using at least one of the vehicle driving information and the vehicle safety information of the source vehicle (column 6, lines 16-63). Kiendl et al. further teaches wherein the vehicle safety information includes: a first warning message indicating an imminent traffic collision between vehicles (column 6, lines 16-27); a second warning message indicating a traffic accident occurrence (column 13, lines 24-33), and a third warning message indicating the entrance of the source vehicle to a crossroads (column 11, line 60-column 12, line 10). Kiendl et al. further teaches wherein the vehicle driving information includes information indicating a traffic accident occurrence of the source vehicle (column 13, lines 24-33). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method and

apparatus of Gorday in view of Impson, with the teachings of Kiendl because as Kiendl suggests, transmitting information regarding vehicle safety status increases the efficiency and relevancy of the information transmitted, allowing vehicles to receive and determine the most efficient route of travel and warn drivers of potential unsafe driving events (column 3, lines 39-59 and column 4, lines 23-39).

Kiendl et al. further teaches the source vehicle sets the routing vehicle ID and destination vehicle ID to a null value and broadcasts the vehicle management information message to the nearby vehicles (column 13, lines 1-22). Kiendl et al. further teaches the source vehicle sets the routing area to a predetermined area, sets vehicle position information contained in the vehicle traveling requirement of the message reception condition to a reference position of the routing area, and broadcasts the vehicle management information message to nearby vehicles contained in the predetermined area (Column 12, line 59-column 13, line 22). Kiendl et al. further teaches wherein the source vehicle sets up a plurality of routing vehicle IDs, and transmits the vehicle management information message to the specified vehicle using a flooding method (column 4, lines 50-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method and apparatus of Gorday in view of Impson with the teachings of Kiendl et al. because as Kiendl et al. suggests allowing the vehicle to direct the destination of the messages increases the efficiency and safety of the system by allowing only the vehicles within a certain range or area to receive event information, further increasing the efficiency of the transmissions of the group (column 11, lines 39-60).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine M. Behncke whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMB

THOMAS BLACK
SUPERVISORY PATENT EXAMINER